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A NEW SUBSPECIES OF *LIMENITIS ARCHIPPUS* (NYMPHALIDAE)

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***Limenitis archippus lahontani* Herlan, New subspecies**

Holotype male: Nevada, Lyon Co., Fernley. Sept. 6, 1966 (D. L. Bauer); Allotype female: Nevada, Lyon Co., Farm District Rd., Fernley. July 26, 1966 (D. L. Bauer). The type locality of *lahontani* is hereby restricted to Fernley, Lyon Co., Nevada, Holotype male and Allotype female deposited at the Los Angeles Co. Museum.

DESCRIPTION: HOLOTYPE MALE

Expanse 63 m.m. Paratype males 60.66 m.m.

Superior Surface

The ground color of primaries and secondaries much paler than the nominotypic subspecies of *L. archippus* (Cramer).

Primaries:

The ground color light ochraceous; shading to a darker tone near the costal margin. The black sub-apical triangle based on the costal margin of *archippus* and reaching the outer margin near Cu2 is based post-median on the costal margin of *lahontani;* reduced in size and intensity and never extending to the outer margin.

Secondaries:

Ground color similar to the primaries. The smudged dark overscaling along the anal margin of *archippus* is a light buff tone on *lahontani.* The solid black transverse post-mesial band found on *archippus* is broken into a series of discrete black dashes, disconnected at the nervules on *lahontani.*

Inferior Surface

Primaries:

The ground color of the discal area similar to the superior surface. The costal patch intense black and extending to the outer margin as in *archippus*. The apical and sub-apical area buff with overtones of ochre.

Secondaries:

The ground color lighter than the primaries; a uniform light buff with dashes of ochre between the nervules in the post limbal area. The mesial band unbroken and slightly swollen at the nervules.

ALLOTYPE FEMALE:

Expanse 68 m.m. Paratype Females 67.75 m.m.

Similar in color and pattern to the holotype male.

RANGE: NEVADA-UTAH

Nevada: At present known only from two closely related areas extending from west-central to northeastern Nevada. Area one follows the course of the Humboldt River from Elko to Lovelock. Nowhere along the river or the adjacent canal systems is it common. It has been taken in limited numbers at Elko, Winnemucca, Rye Patch Dam, and Lovelock. Area two follows the route of the Truckee Canal System from Wadsworth and Fernley to the Lahontan Dam thence along the Lahontan Canal System to the Fallon Area.

Utah: At present known only from the vicinity of Salt Lake City, Ogden, and Provo.

GENERAL DISCUSSION

Nowhere in its present range is *lahontani* abundant. Its existence is being continually threatened by the use of herbicides and the practice of burning *Salix* sp. along the canals and ditch banks.

The center of population is around Fernley, Nevada. For this reason it has been designated the type locality although it is far south and west of the center of distribution.

It seems reasonable to assume that during the early Neo-Thermal stages of the Lahontan and Bonneville Lake Systems *lahontani* enjoyed a much wider distribution than today. Lake Lahontan covered much of the area between Fernley and Lovelock at that time and undoubtedly there was a sufficient growth of *Salix* sp. along the shore line to support a series of colonies through the present Carson and Humboldt sinks. These barren deserts very effectively separate the Humboldt and Truckee colonies today.

Collecting in the area north and east of Elko towards the Snake River system in Idaho has so far failed to turn up additional specimens. However the possibility of locating *lahontani* there should not be ruled out for the future.

A long series of specimens collected by D. L. Bauer in Morrow Co., northeastern Oregon and the adjacent Columbia River area indicate the presence there of an unnamed race intermediate to *archippus* and *lahontoni.*

Thirty-eight specimens examined from the Salt Lake City, Ogden and Provo areas were identical in all respects to those from Nevada. This was to be expected as during the early Neo-Thermal the Lahontan and Bonneville Lake Systems were contiguous along the present Nevada-Utah border. Material examined from Uintah and Grand Co. of eastern Utah is referable to *archippus* as it is known from Colorado to the eastern seaboard.

There is no evidence at hand of a contact or blend zone between *a. lahontani* and *a. obsoleta* from southern Nevada. The absence of *Salix* sp. from the deserts south and east of Fallon plus the distances involved very effectively rule out any mingling of these two races.

The colonies of *lahontani* are found at lower elevations along the permanent water courses of the Lahontan and Bonneville Basins.

It is closely associated throughout its range with *Salix exigua.* Nutt. the common willow of the Great Basin. Although other *Salix* sp. are present, in its range, *lahontani* has not been found where *exigua* is absent. Additional research will be necessary to establish the true relationship of *lahontani* and S. *exigua.* Females have been observed ovipositing on *exigua.* The problem of whether or not, under natural conditions, *exigua* is the preferred host plant of *lahontani* to the extent that it rejects other available *Salix* sp. has yet to be resolved. This could be the factor that limits its altitudinal range to the valleys below 6000′. I know of no specimens from higher mountain elevations.

PARATYPE SERIES

CHURCHILL CO.: Fallon, 7-VIII-66 2♂ 1♀. ELKO CO.: Elko, 27-VIII-66 1♂. HUMBOLDT CO.: Winnemucca 26-VIII-66 1♂. LYON CO.: ½ mi. E. Fernley 14-VIII-66 1♂. 10 mi. E. Fernley 14-VIII-66 6♂ 3♀. 7½ mi.E. Fernley 27-VII-66 1♀. 29-VII-66 3♀. 3-VIII-66 1♀. 6-VIII-66 3♂ 1♀. 7-VIII-66 2♂ 1♀. 5 mi. E. Fernley 28-VII-66 2♂. 3-VIII-66 3♂. 6-VIII-66 4♂. PERSHING CO.: Lovelock 15-VII-66 1♀. Rye Patch Dam 25-

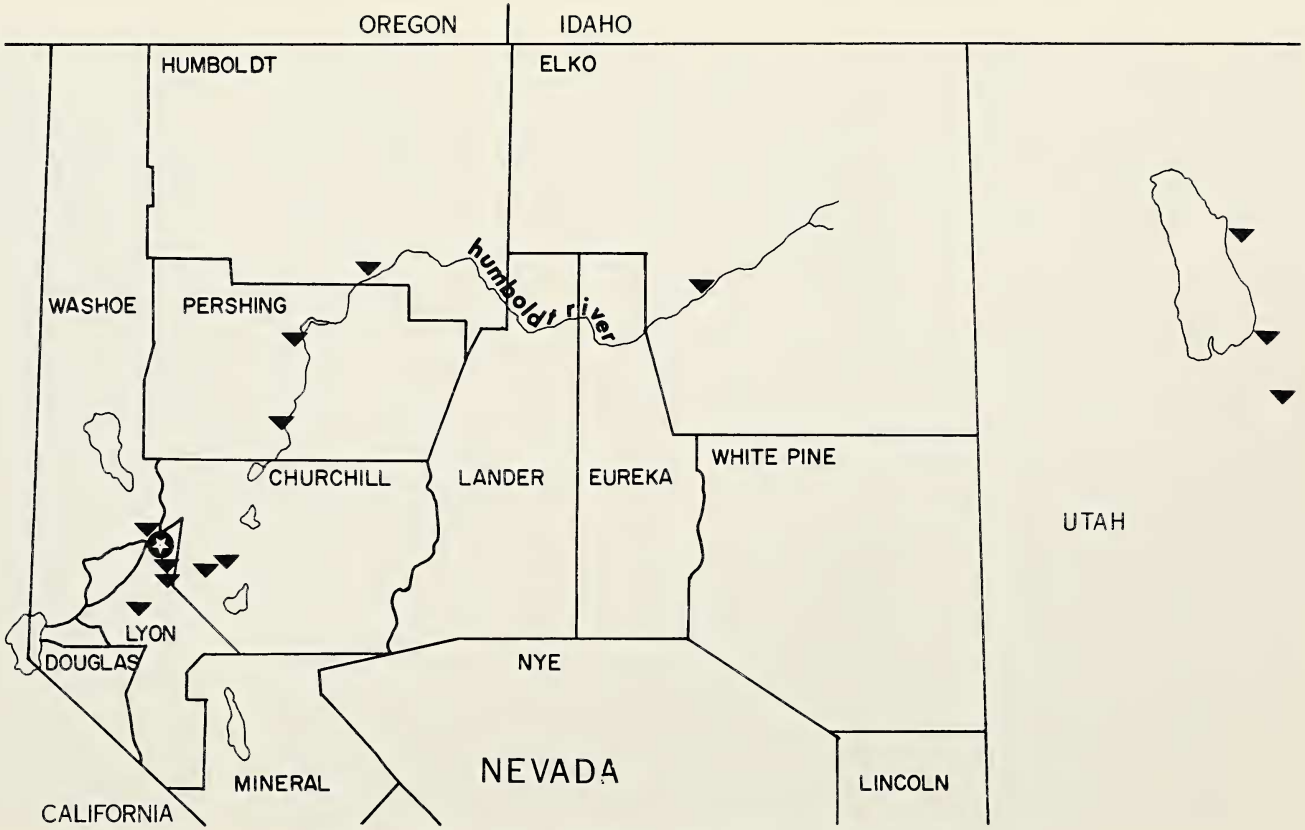

Fig. 1. Geographic distribution of *Limenitis archippus lahontani* in Nevada and Utah. *Type locality.

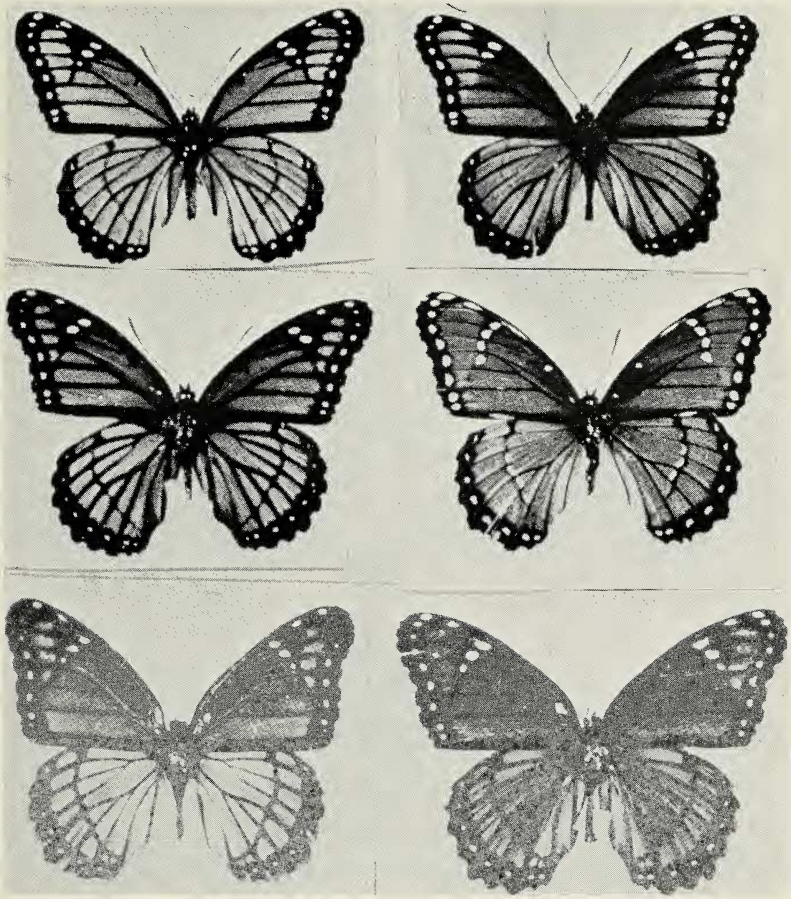

Fig. 2

Top left: *L. lahontani* 6-IX-66, Fernley, Nevada; top right: *L. hoffmanni* 29-VII-54, Tomaseno, Tamalpais, Mexico; middle left: *L. archippus* 1-VIII-67, Sharon, Ohio; middle right: *L. obsoleta* 4-X-64, Overton, Nevada; lower left: *L. watsoni* 12-X-38, Bayou Sorrel, Louisiana; lower right: *L. floridensis* 15-VII-57, Sanford, Florida.

Color photos, including types, to appear in subsequent issue.

VIII-66 1♀. WASHOE CO.: 2 mi. N. Wadsworth 11-VIII-66 3♂. (all P.J.H.) Deposited in Nevada State Museum Collection. LYON CO.: West Side Fernley 4-VIII-66 3♂. 16-VIII-66 3♂ 1♀. 6-IX-66 1♀. 8-IX-66 1♂ 1♀. 5 mi. E. Fernley U.S. Alt. 95. 28-VII-66 3♂. Farm District Rd. Fernley 28-VII-66 1♂ 1♀. Farm District Rd. 8 mi. E. Fernley 28-VII-66 1♂ 1♀. WASHOE CO.: Truckee River, Wadsworth 16-VIII-66 2♂. (all D. L. Bauer) Collection D. L. Bauer.

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